

Title (en)

MULTI-CHANNEL ACOUSTIC ECHO CANCELLATION

Title (de)

MEHRKANALIGE AKUSTISCHE ECHOKOMPENSATION

Title (fr)

ANNULATION D'ÉCHO ACOUSTIQUE MULTICANAL

Publication

EP 3968321 A3 20220518 (EN)

Application

EP 21195031 A 20180928

Priority

- US 201715718911 A 20170928
- EP 18788976 A 20180928
- US 2018053517 W 20180928

Abstract (en)

A method of operating a playback device includes receiving source audio content that includes a first and second channel stream of audio. The method also includes playing back, via a first and second speaker driver of the playback device, the first and second channel streams of audio, thereby producing a first and second channel audio output. A captured stream of audio is received by a microphone of the playback device, and portions of the captured stream of audio correspond to the first and second channel audio outputs. The first and second channel streams of audio are combined into a compound audio signal, and acoustic echo cancellation is performed on the compound audio signal to produce an acoustic echo cancellation output, which is then applied to the captured stream of audio to increase the signal-to noise ratio of the captured stream of audio.

IPC 8 full level

G10L 21/0208 (2013.01); **H04M 9/08** (2006.01)

CPC (source: EP US)

G06F 3/165 (2013.01 - US); **G10K 11/178** (2013.01 - US); **G10L 21/0208** (2013.01 - EP US); **H04B 17/336** (2015.01 - US);
H04L 65/75 (2022.05 - US); **H04M 9/082** (2013.01 - EP US); **H04R 27/00** (2013.01 - US); **G10K 2210/3012** (2013.01 - US);
G10K 2210/505 (2013.01 - US); **G10L 2021/02082** (2013.01 - EP US); **H04R 2227/005** (2013.01 - US)

Citation (search report)

- [I] US 2009010445 A1 20090108 - MATSUO NAOSHI [JP]
- [A] US 2017243576 A1 20170824 - MILLINGTON NICHOLAS A J [US], et al
- [I] KARIM HELWANI ET AL: "Source-domain adaptive filtering for MIMO systems with application to acoustic echo cancellation", ACOUSTICS SPEECH AND SIGNAL PROCESSING (ICASSP), 2010 IEEE INTERNATIONAL CONFERENCE ON, IEEE, PISCATAWAY, NJ, USA, 14 March 2010 (2010-03-14), pages 321 - 324, XP031697816, ISBN: 978-1-4244-4295-9

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 10482868 B2 20191119; US 2019096384 A1 20190328; CN 111418011 A 20200714; CN 111418011 B 20230512; EP 3688755 A1 20200805;
EP 3688755 B1 20210915; EP 3968321 A2 20220316; EP 3968321 A3 20220518; US 10891932 B2 20210112; US 11538451 B2 20221227;
US 11817076 B2 20231114; US 2020043460 A1 20200206; US 2021210062 A1 20210708; US 2023127040 A1 20230427;
US 2024203390 A1 20240620; WO 2019067959 A1 20190404

DOCDB simple family (application)

US 201715718911 A 20170928; CN 201880076788 A 20180928; EP 18788976 A 20180928; EP 21195031 A 20180928;
US 2018053517 W 20180928; US 201916598125 A 20191010; US 202117145667 A 20210111; US 202218145501 A 20221222;
US 202318503971 A 20231107